

## INTERNATIONAL SEARCH REPORT

International application No

PCT/US2007/016027

## A. CLASSIFICATION OF SUBJECT MATTER

INV. D21H13/40 D04H1/64 D04H13/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

D04H D21H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/175478 A1 (LECLERCQ CLAUDE [FR]) 18 September 2003 (2003-09-18) paragraphs [0008] - [0017], [0032] - [0083] claims 1,12,15	1-24
X	US 5 102 728 A (GAY WILLIAM M [US] ET AL) 7 April 1992 (1992-04-07) column 1, line 12 - line 17 column 2, line 3 - column 4, line 4 column 4, line 59 - column 5, line 46	1-24
A	WO 2006/007168 A (OWENS CORNING FIBERGLASS CORP [US]; OWENS CORNING VEIL NETHERLANDS [NL]) 19 January 2006 (2006-01-19) the whole document	1-24



Further documents are listed in the continuation of Box C.



See patent family annex.

## \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

24 January 2008

Date of mailing of the International search report

04/02/2008

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Westberg, Erika

## INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2007/016027

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 497 787 B1 (GEEL PAUL ADRIAAN [NL]) 24 December 2002 (2002-12-24) cited in the application examples 1-3 -----	1-24
A	US 4 138 521 A (BROWN ROBERT) 6 February 1979 (1979-02-06) claims 1-12; examples 1-5 -----	1-24
P,X	WO 2006/087426 A (AHLSTROM GLASSFIBRE OY [FI]; AHLSTROEM OY [FI]; SORVARI JUHA [FI]) 24 August 2006 (2006-08-24) paragraphs [0001], [0004], [0005], [0014] - [0023] claims 10,11,18,20 -----	1-3,21, 22,24

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/016027

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2003175478 A1	18-09-2003	AU 7644101 A	30-01-2002
		BR 0112996 A	01-07-2003
		CA 2418290 A1	24-01-2002
		CN 1443263 A	17-09-2003
		EP 1303672 A1	23-04-2003
		FR 2812012 A1	25-01-2002
		WO 0206605 A1	24-01-2002
		JP 2004504508 T	12-02-2004
		MX PA03000590 A	13-12-2004
		NO 20030857 A	24-02-2003
		PL 360393 A1	06-09-2004
		UA 74840 C2	15-07-2003
		ZA 200300402 A	03-10-2003
US 5102728 A	07-04-1992	NONE	
WO 2006007168 A	19-01-2006	EP 1776504 A1	25-04-2007
US 6497787 B1	24-12-2002	AT 269918 T	15-07-2004
		AU 6220301 A	30-10-2001
		DE 60103999 D1	29-07-2004
		DE 60103999 T2	21-07-2005
		WO 0179600 A2	25-10-2001
		EP 1276934 A2	22-01-2003
		US 2003000663 A1	02-01-2003
US 4138521 A	06-02-1979	BE 835581 A1	14-05-1976
		CH 609394 A5	28-02-1979
		DE 2551291 A1	20-05-1976
		FR 2291328 A1	11-06-1976
		GB 1532621 A	15-11-1978
		NL 7513369 A	18-05-1976
		SE 7512787 A	17-05-1976
		ZA 7507137 A	24-11-1976
WO 2006087426 A	24-08-2006	NONE	

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY  
(PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/US2007/016027

International filing date (day/month/year)  
12.07.2007

Priority date (day/month/year)  
13.07.2006

International Patent Classification (IPC) or both national classification and IPC  
INV. D21H13/40 D04H1/64 D04H13/00

Applicant  
OWENS CORNING INTELLECTUAL CAPITAL, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☒ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office - P.B. 5818 Patentlaan 2  
NL-2280 HV Rijswijk - Pays Bas  
Tel. +31 70 340 - 2040 Tx: 31 651 epo nl  
Fax: +31 70 340 - 3016

Date of completion of  
this opinion

see form  
PCT/ISA/210

Authorized Officer

Westberg, Erika

Telephone No. +31 70 340-4285



---

**Box No. I Basis of the opinion**

---

1. With regard to the **language**, this opinion has been established on the basis of:
  - ☒ the international application in the language in which it was filed
  - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material:
    - ☐ on paper
    - ☐ in electronic form
  - c. time of filing/furnishing:
    - ☐ contained in the international application as filed.
    - ☐ filed together with the international application in electronic form.
    - ☐ furnished subsequently to this Authority for the purposes of search.
4. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

---

**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

---

1. Statement

Novelty (N)	Yes: Claims	<u>4,6-20,22-24</u>
	No: Claims	<u>1-3,5,21</u>
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-24</u>
Industrial applicability (IA)	Yes: Claims	<u>1-24</u>
	No: Claims	

2. Citations and explanations

see separate sheet

---

**Box No. VI Certain documents cited**

---

1. Certain published documents (Rules 43bis.1 and 70.10)

and /or

2. Non-written disclosures (Rules 43bis.1 and 70.9)

see form 210

---

**Box No. VII Certain defects in the international application**

---

The following defects in the form or contents of the international application have been noted:

see separate sheet

---

**Box No. VIII Certain observations on the international application**

---

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

1 Reference is made to the following documents:

D1: US 2003175478 A1

D2: US 5102728 A

D3: WO 2006007168 A1

1.1 Novelty

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1-3, 5 and 21 is not new in the sense of Article 33(2) PCT.

1.2 Document D1

1.2.1 Claim 1

D1 (see D1, paragraphs 8-17, 32-83; claims 1, 12, 15) discloses an impregnated fibrous veil (the glass-fiber mat), comprising:  
a nonwoven fibrous veil including a prebinder and reinforcing fibres consisting of glass fibres, said nonwoven fibrous veil having at least one face impregnated at a rate of about 200 g/m<sup>2</sup>,  
with a formulation (coating composition) including about 80 to about 98 weight percent filler, about 2 to about 20 weight percent binder.

Therefore, the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

1.2.2 Claim 21

D1 (see D1, paragraphs 8-17, 32-83; claims 1, 12, 15) also discloses a method of producing an impregnated fibrous veil with a smooth surface finish, comprising:

impregnating at least one face of a nonwoven fibrous veil including a prebinder and reinforcing fibres with a formulation including about 80 to about 98 weight percent filler and about 2 to about 20 weight percent binder by applying said formulation to said at least one face of said nonwoven fibrous veil at a rate of about 200 g/m<sup>2</sup>.

Therefore, the subject-matter of claim 21 is not new in the sense of Article 33(2) PCT.

### 1.2.3 Claims 2 and 3

Since the fibrous veil disclosed in D1 is identical to the claimed fibrous veil, also the air porosity claimed in claim 2 is implicitly disclosed in D1.  
Microspheres are not mentioned in D1.

The subject-matter of claims 2 and 3 is therefore not new (Article 33(2) PCT).

### 1.3 Document D2

The subject-matter of claims 1-3, 5 and 21 is also disclosed in D2 (see D2, column 1, lines 12-17; column 2, line 3- column 4, line 4; column 4, line 59- column 5, line 46).

The subject-matter of claims 1-3, 5 and 21 is therefore not new (Article 33(2) PCT).

## 2 Inventive step

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 4, 6-20 and 22-24 does not involve an inventive step in the sense of Article 33(3) PCT.

The dependent claims 4, 6-20 and 22-24 all relate to features well-known in the art (see for example D3, whole document) and no inventive step can be acknowledged for the subject-matter of these claims.

## 3 Industrial applicability

The subject-matter of claims 1-24 is considered to meet the requirements of Article 33(4) PCT.

**Re Item VII**

**Certain defects in the international application**

- 4.1 The documents D1- D3 have not been identified in the description and the relevant background art disclosed therein has not been briefly summarised in an objective way. Hence, the requirements of Rule 5.1(a)(ii) PCT are not fulfilled.
- 4.2 Independent claims 1 and 21 are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (document D1) being placed in the preamble.
- 4.3 The sentence "As it will be realized ... from the invention.", on page 3, lines 3-5, implies that the extent of protection may be expanded in some vague and not precisely defined way; cf. the International Search and Preliminary Examination Guidelines Chapter 5.30 and 5.38, Article 6 PCT.  
This sentence should therefore be removed.

**Re Item VIII**

**Certain observations on the international application**

- 4.4 In claim 21 it is not mentioned that the reinforcing fibres consist of glass fibres, ceramic fibres, and mixtures thereof.  
Whilst claim 1 requires a rate of impregnation of 90 to 200 g/m<sup>2</sup>, method claim 21 recites a rate of impregnation of 60 to 200 g/m<sup>2</sup>.  
It results in an inconsistency between the independent claims 1 and 21 (Article 6 PCT).

The features of the product claim 1 are not defined in the independent claim 21.  
Since the present invention, if any, appears to reside in the product, the essential

product features have to be incorporated into the other independent claims . At present the other independent claims do not properly define the matter for which protection is sought. Art. 6 PCT.

Furthermore, it appears that claims 1 and 21 have no same or corresponding special technical features and, hence, the requirements of unity of inventions are not met. Rules 13.1, 13.2 PCT.